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IN HOUSE

FEATURE ARTICLES

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Cover photo—USAF Airman 1st Class Richard Baldassari, right, and Staff Sergeant. Jason Tonkins, both members of the 9th Expeditionary Air Support Operations Squadron, watch the destruction of a suspected insurgent safe house caused by four 500-pound USAF guided bomb units in the Gharman area of Baghdad, Iraq, 19 May 2007. (Photo by SSG Bronco Suzuki, USA)

Director's Comments

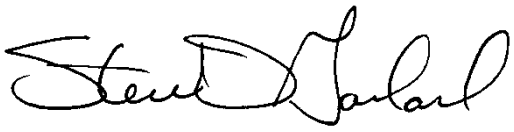
On behalf of the men and women at ALSA, Happy New Year and thanks for your Warfighter support. The past year was busy across DOD and tactical operations continue succeeding because of the people on the ground, in the air, and on the sea making a difference daily. To that end we provide a forum in the *ALSB* for Warfighters to discuss "what worked" and "what needs to get fixed." Currently, we have 12 active projects in various phases of development with 6 additional publications going into research for revision later this year. Right now, look for the newly developed MTTPs on *Air Operations in Maritime Surface Warfare (AOMSW)* and *Strike Coordination and Reconnaissance (SCAR)*. We are nearly complete on *Tactical Convoy Operations (TCO)* with an entire new section on counter-improvised explosive device (C-IED) operations and convoy reactions. Following closely behind is the revision of *Training Security Force Advisor Teams (TSFAT)* that will assist in the training of advisor teams tasked with building partner capacity in developing nations. Look for both of these publications early next year. As always, you can download all of our pubs from the ALSA website or order them through your Service's publication distribution system. The theme for our May 2009 ALSB is "Maneuver" with article submissions due 1 March 2009, and the theme for our September 2009 ALSB is "unmanned aircraft systems" with 1 July 2009 as the suspense for articles.

The theme of this *ALSB* is "Targeting," starting with a look at the broader perspective of targeting methodology and models at the division level and the challenges of applying those models to the current operational environment. Then we shift our focus to the tools available to support targeting in today's environment with a look at the capabilities available from a forward air controller (airborne) [FAC(A)], the growth of digitally-aided close air support (CAS), and closing with techniques to manage emerging requirements for immediate air support. We begin with CW4 Gomez who presents us with a discussion on the challenges of adapting the D3A (decide, detect, deliver, and assess) targeting model and applying it to the counterinsurgency (COIN) fight. He relates his targeting experience in the 25th Infantry Division, providing recommendations for effectively facing the challenge. LTC Carpenter takes the opposite position in "Relentless Pursuit," describing his experience with 3rd Infantry Division and their application of division D3A in a COIN environment. He provides recommendations to achieve success in accurately focusing targeting efforts at the division level. Moving on to tools of the trade, Maj Brown provides a clear lay down of FAC (A) capabilities and the great support they can give a ground commander. Lt Col Ott and SMSgt Davis continue the flow of information with a detailed discussion of the benefits, challenges and limitations of digitally-aided CAS as it is being currently utilized in both Iraq and Afghanistan. We end with a "how-to" piece from LTC (Ret.) Murray on the finer points of immediate air support requests. He describes in detail some techniques and methods available to the tactical level ground commander for fully employing joint assets to prosecute the fight.

In the words of GEN Omar Bradley,

"I learned that good judgment comes from experience and that experience grows out of mistakes."

The articles in this issue provide us with the great benefit of the experiences of other Warfighters. In targeting, the key is analyzing the problem with an open mind and leveraging the success of Warfighters in the field. I'm confident this issue will provide you with valuable insights into options for successful targeting.



STEVEN D. GARLAND
Colonel, USAF
Director

Achieving Symmetry in Counterinsurgency Targeting: The 25th Infantry Division Targeting Experience

By
CW4 Jimmy A. Gomez, USA

Since 2003, operations in the Iraqi theater of operations (ITO) have presented the US Armed Forces with ever-evolving, complex problems that have highlighted shortfalls in doctrinal solutions. The contemporary targeting process exemplifies one such shortfall.

As currently applied in the ITO, the "decide, detect, deliver, and assess" (D3A) process narrowly focuses on kinetic means to achieve lethal and nonlethal effects in an environment where such aims tend to embolden the threats, rather than engender submission. In other words, "If the only tool you have is a hammer, then you tend to view every problem as a nail."

"If the only tool you have is a hammer, then you tend to view every problem as a nail."

BACKGROUND

The targeting (D3A) process is not a distinct series of actions that occur exclusive of the military decision making process (MDMP). Instead, the D3A process begins with the DECIDE step which encompasses decisions made while the battle staff is conducting the MDMP. The DECIDE factors should address the what, how, when, and where to:

1. DETECT an enemy formation.

2. DELIVER or attack that enemy formation.

3. ASSESS the attack on that enemy formation.

Normally, this process occurs daily or can be conducted as event-driven targeting meetings during execution. Refinements to the current plan continue until the mission is accomplished.

THE PROBLEM

The crux of the problem we saw was that the ITO operating environment was far different from the conventional scenarios used to develop the doctrinal foundations of the D3A process. The D3A process was developed to synchronize a typical conventional engagement and, as such, focuses on the employment of largely kinetic means such as infantry, field artillery, armor, and aviation assets to achieve a predominantly lethal effect such as destroy, interdict, or neutralize a conventional enemy formation. Contrast this kinetic focus with a typical counterinsurgency (COIN) engagement which must influence the physical, psychological, and moral elements to isolate the insurgency from the populace by reducing or removing the moral and psychological connections that allow it to exist. Herein lies the problem, the conventional approach focuses primarily on the destruction of the enemy whereas the COIN approach focuses more on securing and influencing the populace.

The contemporary targeting (D3A) process is narrow in its view, negatively lethal in its purpose, with limited enduring effects due to its reactive nature. This reactive approach is further compounded by over-classification and lack of valuable intelligence at the tactical level.

The D3A process we saw currently applied in Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) typically began with a post-mortem of an external catastrophic event to determine our lethal response. However, our targeting approach should have been panoramic in view, positive in purpose, and process adaptive by conducting a detailed analysis of the appropriate political, military, economic, social, infrastructure, and

information (PMESII) factors to include tribal, ethnic, and religious elements. Additionally, we needed a provincial infrastructure analysis detailing the targeted structures or areas of interest. The assessment should have included the interaction between the Government of Iraq (GOI), Iraqi Security Forces (ISF), provincial government officials, and the populace within the ITO. This analysis should also have included the availability and quality of essential services and the level of interaction between all of the previous elements and declared hostile individuals (DHI) including insurgent agitators, criminals, and corrupt government officials and/or corrupt ISF leadership. The result should be demographic factors that require synchronized, simultaneous, or sequential nonlethal engagements to achieve the commander's desired effects. By using a panoramic view, the intent is to provide a balanced view to remove sources of instability and thus prevent or reduce the tendency to remove every target via lethal effects. Consider the following analogy. A person considering a surgical procedure to remove a cancerous growth would first have a wide variety of lab tests, as well as X-rays, MRIs, and doctor consults with specialists to determine the best surgical procedure. No one focused on the patient's well being would skip all the required tests and go straight to surgery. The D3A process we saw currently employed in the ITO appeared to omit all of the preventative measures, diagnostic procedures, and specialized consultations intended to properly diagnose the problem but went straight to surgery instead.

Our counterinsurgency campaign plans and subsequent targeting approach tends to be structured using a compartmented, unsynthesized approach diluted by our over confidence in technology. As we have learned in both Iraq and Afghanistan, the enemy's approach is different than ours. The insurgency's preferred operational and tactical target sets are not coalition forces (CF) but rather the relentless interdiction of the capacity and capabilities of the Iraqi and Afghan governmental and security forces. In Iraq, this predictable irrational, enemy approach creates a coercive high threat environment that produces a chokehold on the population's psyche. Our response to these threats however, was to focus on the physical elements of the insurgency. This narrow focus ignored the psychological, moral, cultural, and religious elements and allowed the insurgents' operational and strategic command and control (C2) elements unhindered freedom of maneuver to influence the critical key terrain—primarily the population centers.

The insurgency's preferred operational and tactical target sets are not coalition forces (CF) but rather the relentless interdiction of the capacity and capabilities of the Iraqi and Afghan governmental and security forces.

A US Soldier from Stryker Brigade Combat Team, 25th Infantry Division, pulls security at a marketplace in Taji, Iraq, 11 Aug 2008. (Photo by SPC Daniel Herrera, USA)

Throughout the 25th Infantry Division's (25th ID) last two deployments to OEF and OIF, the Division Plans section did an excellent job of analyzing the mission. Yet, the targeteers, struggled with the interrelationship between "the plan," which had multi-layers of complexity, and the targeting process. This was particularly prevalent in Afghanistan. In both operations, the CJTF-76 and MND-N targeteers worked diligently to provide target packages, almost exclusively on declared hostile individuals. These targets may or may not have had ANYTHING to do with the current or evolving plan coming from the Division Plans section.

THE SOLUTION

To achieve a true "watershed moment," the ITO operating environment calls for precise, synchronized lethal and nonlethal effects coordination to achieve specific operational and tactical objectives. This is not a new concept. What is new, however, is achieving a change in our thought process and rearranging the staff and organization for a combat structure. The 25th ID established the Boards, Bureaus, Centers, Cells, and Working Groups (B2C2WG) concept, which focuses on synthesizing the inputs (reports from brigade and provincial reconstruction teams [PRTs]) into outputs (via operations orders, contingency operations, or revised guidance to brigade commanders). This battlefield design has merit if we enable the following:

…we must rearrange our efforts and train our company fire support Soldiers, noncommissioned officers (NCOs) and officers, as well as infantry squadron leaders and platoon leaders to proficiently execute our IO plan by enabling tactical leaders with the ability to conduct lethal as well as "nonlethal" missions.

a. Clear establishment of areas of operation (AOs) with a shared understanding of information containing "cross boundary influences" at the operational and tactical level.

b. Proactive gathering of intelligence at the tactical level to feed operational analysis and assessment. This must be complimented by dissemination of all synthesized operational analysis and assessments to the lowest tactical level.

c. Eliminate over classification of valuable intelligence above the "secret" level to ensure timely and effective usage at the lowest tactical level.

d. Focus on the effect of "population influence" with a prioritization for sequential and/or simultaneous actions which influence key nodes.

e. Lethal strikes must remain surgical, nonlethal strikes must influence the masses, and both must be directly tied to cutting enemy moral, religious, and psychological influences on the population. In both cases, they must be overtly surgical and subjectively aggressive.

Before determining any recommendations on how to address all the issues outlined in the background, an effective information operations (IO) plan and a formalized, comprehensive targeting approach must be addressed to optimize the 25th ID's B2C2WG concept.

A gunner with Mobile Assault Platoon, Weapons Company, 3rd Battalion, 6th Marines, fires an M220 tube-launched, optically tracked wire-guided missile. (USMC Photo)

TIMELY, EFFECTIVE, AND RESPONSIVE IO DELIVERY PLATFORMS

Currently, only our leadership appears to engage the civil, religious, or military spheres of influence at the appropriate level (national, provincial, religious, tribal, or ethnic) to convey messages of influence, coercion, or information. The reason that the insurgency has been so effective with its IO campaign is that they have essentially removed the middle man thus increasing their responsiveness to reward support or punish citizens that provide for the "enemy." Using this conceptual construct, we must rearrange our efforts and train our company fire support Soldiers, noncommissioned officers (NCOs) and officers, as well as infantry squadron leaders and platoon leaders, to proficiently execute our IO plan by enabling tactical leaders with the ability to conduct lethal as well as "nonlethal" missions. Our current IO approach is too top-heavy; the division IO officer relies heavily on a few individuals for IO plan execution. By turning this conceptual pyramid bottom side up, it turns every fire supporter and Soldier into a sensor and a delivery

platform for both lethal and non-lethal effects, particularly IO themes and messages. With this empowerment, we could potentially make every engagement a “Silver Bullet” engagement.

A COMPREHENSIVE TARGETING APPROACH

Our current interpretation of the D3A targeting methodology predominantly targets all DHIs with lethal effects. This current war of attrition is not suitable for eliminating a regenerating threat. Our preferred target-sets thrive almost exclusively with improvised explosive device (IED) cell members and to a lesser extent C2 elements and financiers.

We must enable a targeting process that supports efforts to defeat rather than destroy the enemy: In other words taking away their will or ability to fight. While, destroying the enemy is a contributing factor to the defeat effort, in the COIN fight, relentless attempts to destroy the enemy may not accomplish the commander’s intent.

Our predominantly lethal targeting approach worked well during the “initial-entry” phase of OIF and OEF, but has proven entirely one dimensional in the COIN fights. Over the past 3 years it has evolved into an oversimplified temporary solution to a complex long-term problem. With the advent of cell phones and the internet, replacements can be quickly mobilized in place to foster resentment post mission, which enables the quick recruiting and training of new insurgents within hours or even minutes. The insurgent leadership is able to withdraw intact and refit/ recruit new members. He then trains and returns to fight as a more cautious and arguably deadlier force as they continue to introduce foreign technology and revised tactics, techniques, and procedures (TTP) to remain a relevant force. We on the other hand seem slow to incorporate changes to our plans and tactics because of our "it worked last time” mentality. The insurgent leadership however intuitively changes his daily life style to evade capture. Success then can only be achieved by marginalizing the strategic and operational elements of the insurgency by psychologically/morally isolating them from the populace. It can be summed up by the following quote — “It is not a war of attrition. It is not how many enemies do I kill. It’s how many allies I can grow.” (A battalion commander in Anbar Province was quoted by CNN).

“It is not a war of attrition. It is not how many enemies do I kill. It’s how many allies I can grow.”

A US Navy medical corpsman assigned to Riverine Squadron (RIVRON) 2 treats the injured finger of an Iraqi fisherman. (USN Photo)

Therefore, a 3-dimensional, comprehensive targeting approach is better suited and more practical to isolate enemies and grow allies. The emerging targeting effects objectives must encompass short term lethal and nonlethal effects, while creating long term, enduring effects through continual efforts to build ISF/GOI capacity, efficiency, and legitimacy. Just as lethal weaponry rules the kinetic battlefield, a comprehensive targeting approach that encompasses both lethal and nonlethal effects can bring symmetry to the COIN targeting process.

The Effects Based Operations (EBO) Handbook outlines offensive, defensive, stability, and support operations planned and executed to achieve the commander's desired effect on a threat, leader (tribal, religious, ethnic, or governmental),

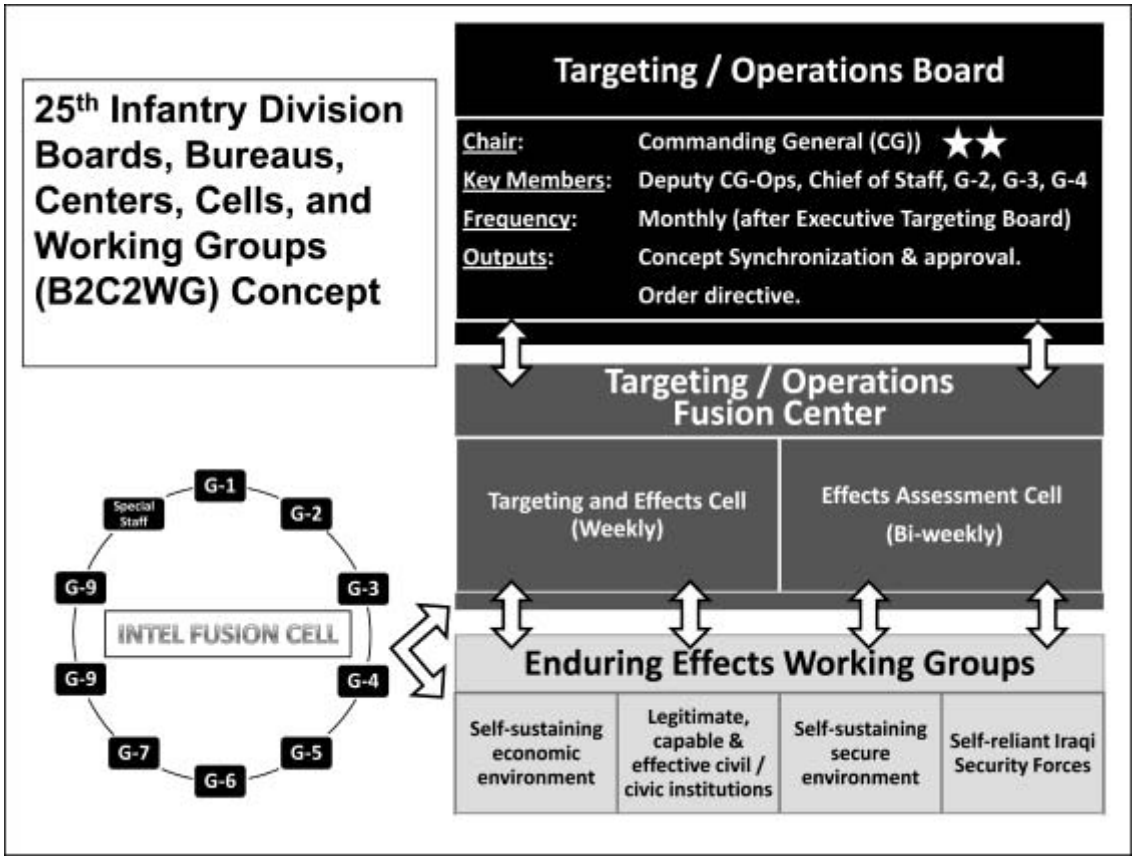
or population group. EBO achieves the commander's desired effect through the synchronized sequential or simultaneous application of maneuver and information.

During the "initial-entry" phase of every combat operation, commanders should focus only on the effects desired against an enemy formation. However, in the COIN environment, commanders expand their field of view to encompass all environmental elements that can affect operations to include rule of law, economic infrastructure, and most importantly the availability and quality of basic services. We should synchronize the sequential and/or simultaneous application of maneuver (lethal and nonlethal effects) and intelligence with IO. Commanders must instill the process down to the lowest unit level to effectively implement a COIN strategy.

We should synchronize the sequential and/or simultaneous application of maneuver (lethal and nonlethal effects) and intelligence with IO.

CURRENT EFFORTS TOWARD IMPLEMENTATION

The 25th ID is currently employing a B2C2WG concept using a 28-day cycle. The final output is a Division Targeting/Operations Board briefing to the division commander who ultimately approves or denies the staff recommendations. The 28-day cycle begins with commander's guidance to develop effects for preempting or countering an assessed threat in support of short and long-term operational objectives. Additionally, the board selects specific actions against specific nodes and identifies the resources which will implement those actions to achieve the desired effects. During execution, they analyze the results via the Effects Assessment Cell and the Intelligence Fusion Cell to provide recommendations to the commander to revise guidance and achieve the desired effects while avoiding undesired effects. As you can see in the figure below, the process is enabled by four, distinct Enduring Effects (EE) Working Groups (WGs). The EE WGs are tasked to confirm that ongoing operations will sustain



25th ID B2C2WG Construct

the "ends to ways to means" alignment relative to commander's intent. They also assess the current state of the provincial government and ISF to determine if CF forces and resources are adequately synchro-nizing the disposition, allocation, and move-ment of host nation forces: people and materiel. The B2C2WG further assists in the adaptation of plans and orders relative to current opera-tions, evaluates actions to identify operational deficiencies, and recom-mends methods to improve execution effectiveness.

RECOMMENDATION

The effects-based approach is valid and should continue being used to plan and operate in a COIN environment. Under this construct, emerging metrics to measure the targeting context must answer three questions: "What are we doing, how are we doing, and are we doing the right things?" Resource allocation then should follow the 30/70 rule.

a. Lethal targeting must encom-pass 30% of our resources. Each company and battalion commander knows, without exception, which sources of instability need to be targeted for removal within their area of responsibility (AOR).

b. Nonlethal targeting must encompass 70% of our resources. The 70% should include initiatives to enable security, governance, and enable the rule of law. Additionally, commanders will need to focus on building capacity to prosecute and incarcerate the criminal/terrorist elements, while providing basic services to enable economic growth.

c. Every target packet must include a lethal task and purpose. However, to achieve a true holistic and synergistic effect, every target packet must also include a "nonlethal" task and purpose, re-sourced and synchronized by division for each and every concept of operations (CONOPS).

d. As previously mentioned, avoid over-classification of intelli-gence information. There are many existing and emerging Intel-driven initiatives which exclusively focus on detecting and tracking insurgent leaders, IED technical experts, and financiers. But the resulting analysis and assessments rarely make their way to the division plans section, effects working groups, or even to the corresponding tactical staffs. If the information is not used in a timely manner by the tactical planners and commanders, then it is ineffective and irrelevant.

CONCLUSION

The D3A process is ill-structured to adequately and effectively deal with the complex realities of problems facing US forces in Iraq. Whereas doctrine prescribes that we apply the D3A process, the operational envi-ronment in Iraq demands a more holistic approach to properly assess the problem and then determine the most effective solution via both lethal and nonlethal effects. We must enable a targeting process that encompasses all of the environ-mental elements to synchronize the sequential and/or simultaneous application of maneuver (lethal and nonlethal effects) and intelligence with IO to achieve battlefield symmetry in the COIN fight. The B2C2WG provided 25th ID a working construct.

The D3A process is ill-structured to adequately and effectively deal with the complex realities of problems facing US forces in Iraq.

The Division D3A in a COIN Environment "Relentless Pursuit"

Marines on patrol in Ramadi. (USN photo)

By
LTC Eric Carpenter, USA

The 3rd Infantry Division (3rd ID) deployed to Iraq for its third time in support of Operation Iraqi Freedom (OIF) 05-07 for 15 months as the Task Force (TF) Headquarters for the Multi-National Division Center (MND-C) in the southern belts of Baghdad. MND-C, as part of the "surge," did not fall in on another division's staff processes and procedures. We had to build our processes from the bottom up, based on past OIF experience and a general staff approach of trial and error. A particular struggle was defining the role and purpose of the division headquarters now that the Brigade Combat Teams (BCT) formations possessed many of the enablers formerly organic at the division level. Two key questions we asked ourselves were: 1) What was the division fight? and 2) How does the division become value added to the current BCT fight? One of the areas where MND-C was value added and enabled the success of the brigades was in lethal targeting operations.

We had to build our processes from the bottom up, based on past OIF experience and a general staff approach of trial and error.

MND-C developed a targeting process that resulted in the capture or killing of 46 division high value individuals (HVIs) and over 77 brigade or below HVIs. MND-C adapted the decide, detect, deliver, and assess (D3A) process to fit the counterinsurgency (COIN) fight throughout its operational environment (OE). As a doctrinal targeting methodology, D3A sounds intuitively obvious and appropriate, yet there are clear distinctions between application of D3A in a high intensity conflict (HIC) and its application in a COIN environment. Generally speaking, in a HIC environment targeting personnel apply D3A to identify, prosecute, and

target large formations. However, in a COIN environment, the targeting process is not executed in an effort to identify and destroy large military formations. Instead, it is used to identify, develop, and target individuals within a network using precise targeting operations in order to reduce, neutralize, and eventually destroy a network. This article explores in depth how 3rd ID adapted and applied D3A as its overarching framework for targeting in a COIN environment.

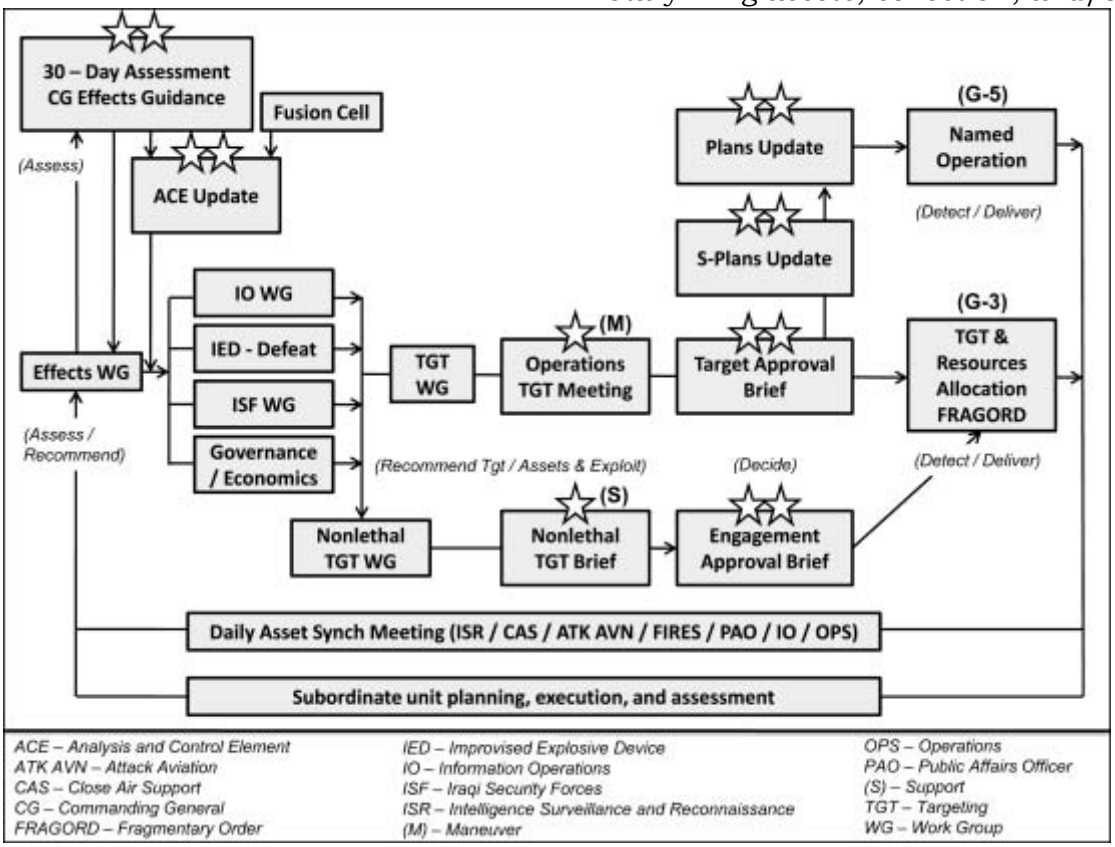
MND-C TARGETING PROCESS OVERVIEW

The targeting process that 3rd ID used during OIF was a directed and focused approach employing varied assets at multiple levels to develop and prosecute targets using the D3A methodology. The commanding general (CG) focused the division targeting effort through the guidance and targeting objectives.

Targeting events were then integrated into the daily schedule to effectively synchronize the targeting process with the division battle rhythm. The figure below shows 3rd ID's targeting process linkage between D3A and battle rhythm meetings/workgroups that had input into the targeting process.

Targets were either developed by the division Analysis and Control Element (ACE) or nominated by the brigades for inclusion on the division target list. The CG directed specific requirements and criteria that had to be met in order for a target to become designated as a "division" target. The CG criteria ensured only the most important and actionable targets became division targets for which echelons above division (EAD) collection assets would be requested. The division target list was prioritized based on the operational focus of the division for a given period of time. This prioritization enabled the division to prioritize its requests for Echelon Above Division (EAD) assets from Corps to assist in the targeting effort, such as: EAD unmanned aircraft systems (UAS), close air support (CAS) for time sensitive targeting (TST) situations, additional rotary wing assets, collection, and/or

The targeting process that 3rd ID used during OIF V was a directed and focused approach employing varied assets at multiple levels to develop and prosecute targets using the D3A methodology.



3rd ID Targeting Process – D3A

action by US special operations forces (SOF) or other Multi-National Divisions (MND).

The division targeting team consisted of members from the Fires and Effect Coordination Cell (FECC), aka "G3 Targeting," as well as elements from within the G2 ACE to include: the G2 Targeting Cell, G2 Signals Intelligence (SIGINT), G2X, and the G2 Exploitation Cell. The G3 Targeting Cell was responsible for facilitating the transition of targeting data from the G2/S2 channels (SIGINT, human intelligence [HUMINT], geospatial intelligence [GEOINT]) to the G5/G3/S3 channels. The data transfer was one of the ways the division "operationalized intelligence," or continuously integrated intelligence into operations. The G2 Targeting Cell members were the subject matter experts (SMEs) and provided the analytical effort focused on the division TOP 15 targets. The analysts further identified and developed members within these networks. Coordination efforts by the G3 targeting team, with outside agencies, aided their ability to develop accurate, user friendly target packets which could be proactively shared with elements of US SOF and across other divisions. By developing a strong spirit of cooperation, the task force was able to gain a much greater and clearer intelligence picture of the battle field across the MND-C OE and its area of interest.

Based on our 15 months in theater the division averaged two targets per week that were killed or captured using this method.

DECIDE

The Decide function of the division targeting process was based on a combination of the division mission statement, division high payoff target list (HPTL), division commander's guidance/targeting objectives, and the target approval brief.

MND-C MISSION STATEMENT

TF Marne's mission is to block accelerants into Baghdad, secure the population, and defeat sectarian violence in order to create the conditions for long term Iraqi self-reliance.

The division mission statement and commander's guidance drove the creation of the division HPTL. The HPTL, in the COIN environment, was a prioritized list of target types whose loss to the enemy would degrade or neutralize the extremist network, whether it be Sunni or Shia. The division HPTL was nested with the MNC-I HPTL and accomplished two things: 1) prioritized target types given competing demand and, 2) helped determine collection/action plans allowing the brigades to focus their efforts.

The commander's guidance and targeting objectives focused the division's targeting effort to ensure that priority and resources were given to selected targets. The CG's guidance was derived from his daily review of intelligence reports and battlefield circulation. The target approval brief was the battle rhythm event that provided the CG with an update on the division targets and a recommended priority for collection and/or action. The CG made a decision based on the targets with the most actionable intelligence. Based on our 15 months in theater the division averaged two targets per week that were killed or captured using this method.

HOW ARE TARGETS SELECTED?

Targets were nominated by the BCT to the division. The criteria included:

- Meets requirements of HPTL.
- Cross BCT/MND boundaries.
- Sunni extremist with the title of Emir or reported as a cell leader.
- Shia extremist with the title of battalion commander or higher who have derogatory information against them.
- Actionable target with established pattern of life, current

location, and can be positively identified.

- If the target is killed or captured, it will disrupt the movement of accelerants into Baghdad.

Once a target is nominated to the division, the division and brigade intelligence teams begin a cyclic process to refine the nominations. Division analysts receive the brigade target packets on the nominated individual(s) and work with the brigades to develop these individuals for further action. During the development of these targets, the analysts identify additional individuals within the targeted individual's network that could have a further impact on the division mission. The division will also develop these extra individuals as possible targets, recommending the packet to the brigade for a later nomination. The cyclic effort allows the brigade to recommend individuals that are impacting their battlespace, and the division G2 targeting team is then able to develop the network around the target to identify individuals with larger impact operating within a brigade OE. The nominated targets are then added to the division high value target list (HVTL) and Division Top 15 target list.

TARGETING CYCLE - WEEKLY

A developed and refined targeting cycle ensures that targeting information is continuously updated and the commander is able to execute a mission as soon as a target's location is identified. A targeting cycle should be determined by the frequency/ amount of reporting and troop to task (T2T) based on the amount of combat power available to conduct lethal targeting operations. 3rd ID conducted a weekly targeting cycle with three meetings consisting of: the targeting working group (WG), the operations targeting meeting, and the target approval brief.

The targeting WG was chaired by the G3 and attended by the G2, G2 Targeting Analyst, G2X, G2 Collection Manager, SIGINT OIC, GEOINT OIC, G3 Targeting Officer, Deputy Fires Support Coordinator, Air Liaison Officer, BCT liaison officers (LNOs), and SOF LNOs. The targeting WG was designed to discuss issues, concerns, and recommendations at the action officer level. Inputs included intelligence and operational updates focused on information that would lead to the target being actioned. The updates, briefed by the G2 Targeting Analyst(s) and BCT LNOs, included significant pattern of life changes and operations conducted and/or planned by the BCTs against the division target or an associate(s) of the target. The resulting output target list was presented for further refinement at the operations targeting meeting.

The operations targeting meeting was chaired by the Deputy Commanding General (Maneuver) (DCG-M) and was attended by the G2, G3, G3 Targeting, G2 Targeting Analyst, and BCT LNOs. This meeting was designed to focus solely on the operations conducted by units the previous week and operations planned for the next week. Inputs included new intelligence since the targeting WG and operational updates briefed by the BCT LNOs. The difference between the operations targeting meeting and the targeting WG was the focus on operations and the assessment of those operations. Emphasis was focused on "pulling the string" for each target. "Pulling the string" was a metaphor for determining all of the potential aspects involved in targeting the individual, such as targeting lower level associates within the network, asking specific questions to a detainee, or asking the local tribal leader if they had any information on the target. The resulting output was a prioritized target list for the following week to be presented at the target approval brief.

The cyclic effort allows the brigade to recommend individuals that are impacting their battlespace, and the division G2 targeting team is then able to develop the network around the target to identify individuals with larger impact operating within a brigade OE.

SFC Darren Atterbery, 4th Battalion, 42nd Field Artillery Regiment, 4th ID, launches an RQ-11 Raven unmanned aerial vehicle near Taji, Iraq. (Photo by PO1 Michael Larson, USN)

The target approval brief was chaired by the CG and attended by the entire division staff and LNOs. The target approval brief was designed to focus the division targeting effort and allocate resources to collect or action targets. The format of the brief covered the targets that were approved for action last week and the assessment of those operations; significant updates to the division Top 15; and the most actionable for the next week. Based on the information provided, the CG would either approve or change the staff's recommendation. The output from the target approval brief was an approved prioritized list of targets for either further collection or action. This was then either tasked in a fragmentary order (FRAGORD) or division operations order.

As the low level members of the network were removed the division HVIs became more active in the network which disrupted their normal routine.

DETECT

The division's role in the Detect portion of D3A was the prioritization of targets and the resource allocation of ISR assets to the BCTs for collection. The BCT then developed and executed the ISR plan based on the assets provided by the division. BCTs used a combination of SIGINT, HUMINT, and GEOINT functions to conduct target development and establish a pattern of life for division HVIs. Examples of these assets were UAS, national level imagery platforms, common ground station (CGS), forensic analysis, ground moving target indicators, and historical reporting.

DELIVER

The deliver phase of the targeting process utilized our own organic BCT assets and US SOF to action division targets. This was based on a SIGINT or HUMINT trigger that allowed the action arm or maneuver force to action the target.

During our 15-month deployment we went through three distinct targeting evolutions. A targeting evolution can be described as a point in time when targeting operations and focus need to change based on the enemy changing their tactics, techniques, and procedures (TTP). The first evolution was the normal target development and prosecution of the division HVIs resulting in the capture of 12 targets. The second evolution occurred when division HVIs became more difficult to target and capture as they learned to adapt to our operational procedures. This evolution was different from the first in that the targeting effort and focus was on the low level members of the network. As the low level members of

the network were removed the division HVIs became more active in the network which disrupted their normal routine. This disruption caused early warning networks to fail and division HVIs became more targetable. The third targeting evolution was when the majority of the division HVIs left the MND-C OE to find sanctuary in other MND's OE. At the division level the targeting effort was then focused on the coordination between the division and US SOF to develop and action our targets. The focus at the BCT level was on the development and action of targets that were associated with the division HVI. The intent behind this was twofold: 1) tactical questioning at the point of capture to gain actionable intelligence leading to another target associated with the division HVI, and 2) the possibility that intelligence exploitation of the associate would lead us to exploit the division HVI.

The criteria that we used to determine if a target was actionable were:

- That the target must be positively identified based on a current photo and/or physical description.
- That the target can be positively identified by a source.
- To have the current target location.
- To have enough evidence to prosecute and convict the target.

ASSESS

The Assess portion of the D3A was formerly conducted during the operations targeting meeting led by the DCG-M. This was the opportunity for the BCTs to provide their assessment of the targeting operations conducted or planned against the division HVIs. The assessment for 3rd ID consisted of reviewing the operations conducted on the target from the previous week. If the target was captured we went back into the Decide function to determine what the exploitation plan was for interrogation to further develop the network. If the target was not captured or there was no developing intelligence on him we went back into the Decide function of the targeting cycle to determine: 1) Who else in the network can we target? 2) What other sources can be used to get information on the target? 3) What other operations can be done to get closer to actioning the target? 4) Are the Sons of Iraq (SOIs) and Iraqi Army (IA)/Iraqi Police (IP) aware of the target and/or do they know anybody who knows the target.

Although the formal assessment was done at the operations targeting meeting, it was not the only place assessment took place. All personnel involved in the targeting process conducted a 360 degree assessment during all phases of the targeting cycle to determine if we were "doing things right and doing the right things." The targeting community had to determine if it was doing everything possible to either gain better intelligence or conduct a better operation against the target.

The keys to our success were the ability to leverage collection assets to exploit networks and patterns of life on division HVIs; the coordination and cross talk between units at all echelons; and the intelligence driven, precision focused, detailed targeting operations.

CONCLUSION

3rd ID successfully adapted the D3A methodology in a COIN environment to kill or capture 46 division HVIs and over 77 BCT and below HVIs. The keys to our success were the ability to leverage collection assets to exploit networks and patterns of life on division HVIs; the coordination and cross talk between units at all echelons; and the intelligence driven, precision focused, detailed targeting operations. The combination of the above and the flexibility to adapt processes and procedures as the tactical/operational situation dictated increased the probability of detection, execution, exploitation, and prosecution of division HVIs.

Working for "The Man": FAC(A) Coordination for Ground Commanders

Future rotary wing FAC(A) platform, the AH-1Z. (Photo courtesy of Lockheed Martin)

By
Maj "Noser" Brown, USMC

…recent combat experience has shown that the most important utility in having a FAC(A) overhead lies with the mission essential tasks other than terminal control that he can provide supported commanders.

In the past few years, there has been a lot of interest and effort towards the creation of forward air controllers (airborne) [FAC(A)] in the Fleet Marine Force. The Marine Corps is now well on its way to having FAC(A) capability in all of its "shooting" platforms with the addition of the AV-8B and FA-18A+/C aircraft into this mission set. Most people think FAC(A)s perform terminal control of weapons in support of the ground element under the classic conditions of close air support (CAS). However, recent combat experience has shown that the most important utility in having a FAC(A) overhead lies with the mission essential tasks other than terminal control that he can provide supported commanders. FAC(A) squadrons must set the record straight by focusing on the most important facets of this mission and on how properly trained aircrew in fixed or rotary wing aircraft can best contribute to a ground element's success on the battlefield.

The joint FAC(A) memorandum of agreement spells out multiple tasks that qualified aircrew must be able to perform. There are eight listed:[1]

- Terminal Attack Control
- Radio Relay
- Reconnaissance
- Indirect Fires Call for Fire (CFF)
- Asset Coordination/Deconfliction
- Battle Damage Assessment (BDA)
- Target Marking/Designation/Coordinate Generation
- Suppression of Enemy Air Defenses (SEAD) Coordination.

As a whole, the FAC(A) community has failed to appropriately emphasize the importance of "non-terminal attack control" tasks to the supported unit and how these seemingly less glamorous capabilities contribute more to winning the fight.

FAC(A) terminal control has less importance now than in the past due in part to the increased amount of intelligence, surveillance, and reconnaissance (ISR) available to units on the battlefield and their ability to direct a platform's sensors from the ground via digital communications and streaming video. With the incorporation of Remotely Operated Video Enhanced Receiver (ROVER) kits into most line units in the Marine Corps, joint terminal attack controllers (JTACs) and air officers can now see what their CAS aircraft are looking at in real time and confidently control the delivery of aerial munitions. This capability has reduced the need for terminal control beyond the horizon from FAC(A)s. In the last 4 years in Iraq, only four percent of all fixed wing ordnance deliveries in support of ground troops were terminally controlled by a FAC(A) in the Marine expeditionary force (MEF) area of operations. During the last 2 years of Operation Iraqi Freedom, there was only one recorded instance of a Marine FAC(A) controlling another aircraft's ordnance.[2] However, a FAC(A) can still be the critical link that allows a JTAC to give a "Cleared Hot!" call by focusing on the other seven joint mission essential tasks, which are crucial to holding the kill chain together. The following paragraphs will examine the tasks other than terminal control that a FAC(A) can execute for the supported unit, why these missions are so important, and some of the factors that FAC(A)s must consider when performing them.

RADIO RELAY

Arguably the least exciting mission for an airborne controller is radio relay, although a strong case can be made to put it at the top of the list as the most important task of all. Most aircrew who have flown in support of ground troops have performed this function by conveying a message on their radios from someone else to a third party. At that moment in time, they may not have grasped the significance of dispatching that information. From a ground perspective, this seemingly trivial task is invaluable for several reasons. First of all, depending on the unit being served, they may or may not have suitable communications gear for the environment where they are fighting. Not all units have dedicated satellite communication channels that can connect units working beyond line of sight from their headquarters. Additionally, some environments, such as the urban battlefield, severely degrade tactical communications nets due to vertical terrain. We will see these capabilities taxed even further as we move towards Distributed Operations and put more responsibility on the individual Marine. In all of these examples, ground units must employ "workarounds" in order to transmit and receive critical information. Typically, these workarounds involve aircraft flying overhead that can pass that information.

FAC(A) terminal control has less importance now than in the past due in part to the increased amount of intelligence, surveillance, and reconnaissance (ISR) available to units on the battlefield and their ability to direct a platform's sensors from the ground via digital communications and streaming video.

The importance of radio relay should be clear, but the challenge involved with effectively conducting it may not be. There is some degree of risk in having a third person who does not clearly understand the context and intent of the message transmitting that information to another party. Vital pieces of information can be altered or left out by the absence or change of a single word. We have all played the game where someone starts with a message, and each player whispers it to the person next to them. By the time it gets to the last person, a completely different message has been passed. It goes without saying that combat is no place for such

games. The ground commander may be relying on that information to make it to the appropriate destination for a variety of reasons. Here is where the FAC(A) aircrew, being experienced enough to understand the unspoken meaning and intent behind the messages being passed, should shine. This capability is only gained through proper training and a healthy experience base acquired through briefing, flying, and debriefing with ground units to reinforce lessons learned. There may even be times when a JTAC will ask to use a particular aircraft's radios in an Automatic Collection and Transmission (AUTOCAT) capacity. In this case, aircrews are removed from having to interpret the information passed or received, and the aircraft's radios are set up to automatically retransmit the message on another frequency. FA-18s, AV-8Bs, and AH-1Ws are all capable of performing this utility, although other attack aircraft in the joint inventory used for FAC(A) are not equipped to meet this need. The bottom line is that the ground commander needs timely and accurate information to direct the battle; FAC(A)s can be a precise and expeditious means of passing that information.

With a heavy contingent of supporting aircraft flying over today's battlefield, the biggest threat that our aircrew face may not be from the enemy, but rather from other friendly assets.

ASSET COORDINATION AND DECONFLICTION

With a heavy contingent of supporting aircraft flying over today's battlefield, the biggest threat that our aircrew face may not be from the enemy, but rather from other friendly assets. With the fielding of multiple, autonomous, unmanned aerial systems and overlapping orbits of fixed wing CAS elements working adjacent to one another, our aircraft are currently in more danger of hitting one another than being lost to an enemy round. As discussed previously, the tactical air control party (TACP) may have difficulty conveying information to aircrew due to communications line of sight issues. FAC(A)s can be a tremendous help to JTACs who are on the move, or unable to establish communications with CAS aircraft due to their proximity, by assigning aircraft to an altitude block and/or a laterally deconflicted place to hold as they enter the airspace. The situation can become very complex depending on what assets populate the operational environment. With the addition of artillery, mortar, and/or High Mobility Artillery Rocket System (HIMARS) gun target lines, restricted operating zones, and formal and informal aircraft coordination areas, poor communications can lead to disaster for inbound and outbound aircraft. By having an airborne asset that has the plan and can act as an assertive member of the TACP, a dangerous situation can give way to an environment conducive to killing the enemy from the air.

It is imperative that FAC(A)s understand what assets are expected in the stack and what the performance characteristics are of the aircraft. For example, the following are just a few of the questions that need to be answered for each aircraft entering the fray. What altitudes can the aircraft hold at to best conserve fuel? What flight envelope do the weapons on board need for the best probability of success? What is the aural signature of the aircraft and how will the proximity of the holding orbit affect the target(s) on the battlefield? What type of sensor does the aircraft have, and what are its limitations under the current environmental conditions? Does the targeting pod have a ROVER datalink, and if so, what is its range? The FAC(A), based on training and experience, should have the answers to these questions and be able to safely direct aircraft as they enter and exit the target area based on their operating capabilities and limitations. In addition to air-craft management, other assets must be included in the coordination plan. For example, how will gun target

lines from conventional indirect fire assets affect where aircraft can hold? How will the use of guided multiple launch rocket system (GMLRS) from a HIMARS affect stack management? By having a FAC(A) that is read in on the plan, or one that has the experience to develop one real time and effectively convey it to other assets, the TACP gains an expedient, invaluable ability to manage a dynamic, 3-dimensional battlefield while still focusing on the enemy before them.

RECONNAISSANCE

Finding the enemy continues to be a challenge. This is especially true for manned aircraft with a limited time on station. FAC(A)s must be prepared to search for and find the enemy when the TACP requires it. All too often, we train our FAC(A)s to believe that a JTAC will pass them coordinates and ask them to control the fight as he sits back and watches the show. Nothing could be further from the truth. A JTAC does not need a FAC(A) to kill targets that he can see; he needs one to find and kill targets that he cannot see.

The importance of this task is rivaled only by the challenge it poses to the FAC(A). Although technology has come a long way since the first Marine FAC(A) fast moving aircraft, the TF-9Js under the call sign "Condole," flew over the Ho Chi Minh Trail in Vietnam, modern electro-optical and infrared (IR) advances do not always give the definitive edge in finding an intelligent, elusive enemy. Targets may or may not be IR significant on targeting pods. Electro-optical sensors may not be able to detect well camouflaged and concealed enemy positions. The weather may not cooperate in having aircraft maintain an altitude sanctuary above threat systems. Binoculars may be the best sensor available to aircrew on a given day. Regardless, FAC(A)s must be proficient in using all of these methods to seek and find the enemy and know when a specific sensor is better than another based on the tactical situation at hand.

Airborne controllers can help themselves by training to use these tools under all conditions and by practicing searching for realistic targets in unfamiliar training areas. The targets on these ranges should not have been rote memorized through years of repeated use. Furthermore, FAC(A)s must have more than one search profile at their disposal. A FAC(A) must be prepared to search with a targeting pod or visually scan while flying at lower altitudes depending on the situation and the amount of risk required. If the airborne controller cannot see the enemy, then he cannot kill him, and he certainly won't be giving a "Cleared Hot!" call.

Binoculars may be the best sensor available to aircrew on a given day.

Although the F-35, the next fixed wing FAC(A) platform, will have tremendous capability, it will not initially be equipped with such basic tools as an IR pointer or a streaming video datalink, systems that legacy platforms currently employ for ground forces today. (F-35 Lightning II Photo courtesy of Lockheed Martin)

TARGET MARKING/ DESIGNATION/COORDINATE GENERATION

Along with finding targets, TACPs can really profit from having a proficient airborne controller overhead to find, fix, and guide ordnance on target. As stated previously, the ground element may or may not be able to visually acquire target(s) depending on the tactical environment. An overhead asset that not only moves its precision sensor real time, but also looks outside the

cockpit and takes in the big picture, can help the ground commander place his limited assets in the best possible posture. In addition, the FAC(A) may be in a much better position to lase for a ground party that does not have designator line of sight to the target or may not have the time or logistical capacity to employ a laser system. FAC(A)s can also be a great option to visually mark a target with ordnance or an IR pointer when required. These same tools can be used as initial terminal guidance for assault support or casualty evacuation (CASEVAC) flights as well, again taking some of the burden off of the ground element. Furthermore, the right aircraft with a proper targeting pod may be able to generate better coordinates than the ground party if ordnance is desired. The ground element may or may not have the tools to derive high confidence coordinates. Although sophisticated, deployable software based on imagery exists and is fielded, the target may or may not be in the image segment available (i.e., a moving target, a recently built structure, etc.). The airborne controller who is able to find, fix, and terminally guide ordnance on that target under the JTAC's control or direction can have a significant impact on the battlefield.

By using his skills in reconnaissance, asset coordination, coordinate generation, and target marking, the FAC(A) may free up the ground element to focus on their primary target while still enjoying the benefits of airpower overhead.

High Mobility Artillery Rocket System (HIMARS) (USMC Photo)

SUPPRESSION OF ENEMY AIR DEFENSES (SEAD) COORDINATION/CALL FOR FIRE

Logically, the enemy is not going to cooperate as we search for and subsequently destroy their personnel and equipment. Friendly aircraft will always have some form of threat to recognize and avoid. When air defenses make CAS prohibitive, the ground element must have a way to restore permissive airspace to maximize their advantage. A key benefit to employing a FAC(A) is the ability for the ground element to continue to focus on their priority mission while allowing an airborne controller to coordinate suppression of the enemy's air defense. This coordination implies either a higher risk mindset from the airborne controller (because the threat can target his aircraft) or that the threat is affecting another part of the air-to-ground team (for example: a tactical surface-to-air missile system that puts fixed wing at risk but is a lower threat to a rotary wing FAC(A) aircraft). By using his skills in reconnaissance, asset coordination, coordinate generation, and target marking, the FAC(A) may free up the ground element to focus on their primary target while still enjoying the benefits of airpower overhead. Additionally, properly trained FAC(A)s can help coordinate the fires from geographically separated artillery units, ships, or other indirect fire assets by acting as an aerial forward observer. Most importantly, a FAC(A) is equipped to coordinate the effects from both aircraft and artillery on targets, steered by the ground commander's intent.

BATTLE DAMAGE ASSESSMENT

At the end of the day, the supported commander must know whether he achieved his desired effects on the enemy. On a dynamic battlefield, this information may be hard to come by in a timely fashion. A FAC(A) may be able to shed some light on whether the commander's criteria was met, but there are limitations with how well an airborne asset can estimate the damage below, due to fuel considerations, sensor capabilities, weather, and other similar limitations. More than

likely, an airborne controller can give an initial sketch of how well the target was serviced, but the ground element will need to use other ISR assets to assess the damage. Rotary wing FAC(A)s have a distinct advantage over jet aircraft in this capacity with the ability to get closer and get eyes on at a slower speed, threat permitting.

OV-10 Bronco observation aircraft developed in 1960s, primarily as a forward air control aircraft.(Air War College converted photo from Nov 1996 Defense Image Digest CD-ROM)

Imagine if today, we still had the time on station, slow speed loiter, and cockpit visibility of the OV-10 Bronco in our fixed wing aircraft!

CONCLUSION

Forward air controllers (airborne) have become popular recently in Marine circles as an added capability for ground forces. Unfortunately, most of the training focus has been on terminal control instead of the other skills required of a FAC(A). In recent conflicts, terminal control has been a low percentage task for airborne controllers, whereas the need for the coordination aspects of the FAC(A) mission is as strong as ever. With recent technological advances that have been fielded and proven in battle, the advent of the different types of terminal control in joint doctrine,[3] and the push for more JTACs in infantry and combat arms battalions, we have moved past the days of requiring a FAC(A) to substitute for a TACP. However, the need for aircrew savvy in the finer details of the CAS mission has never been more important as we continue to deliver sophisticated ordnance in close proximity to friendly troops, operate in increasingly complex airspace, and engage the enemy in urban areas with noncombatants and their property nearby. As such, the Fleet Marine Force must focus more on the tasks of the FAC(A) mission outside of terminal control that give our ground forces the tactical advantage against our enemy when our primary means of communication, target location, and asset coordination fail.

As such, the Fleet Marine Force must focus more on the tasks of the FAC(A) mission outside of terminal control that give our ground forces the tactical advantage against our enemy when our primary means of communication, target location, and asset coordination fail.

END NOTE

[1] Joint Close Air Support (JCAS) Action Plan Memorandum of Agreement 2004-02, Joint Forward Air Controller (Airborne).

[2] Data compiled by the 2d and 3d Marine Aircraft Wings (Forward) from 2004 through 2008.

[3] JP 3-09.3, Joint Tactics, Techniques, and Procedures for Close Air Support, Change 1, defines three types of terminal control used today.

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Digitally-aided CAS Grows Roots in Theater Operations

By
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SMSgt Christopher A. Davis, USAF

Digitally-aided close air support (CAS) is growing firm roots in the CAS world. The Iraqi theater implemented digital CAS in June 2008 and Baghdad saw the first all digital sourcing of assets with coordinates sent over data link through a gateway to support troops-in-contact on 5 Aug (see: http://www.airforcetimes.com/news/2008/08/airforce_digital_first_081808/). While less robust in Afghanistan, the digitally-aided CAS structure is starting to grow and gain momentum.

While less robust in Afghanistan, the digitally-aided CAS structure is starting to grow and gain momentum.

This article focuses on the benefits and challenges of beyond line of sight (BLOS) digitally-aided CAS primarily from an Afghanistan perspective while offering techniques and procedures to optimize use while mitigating limitations. Digitally-aided CAS will continue to grow and become a primary means to translate ground commander requirements into air asset tasks, and like any other capability, the benefits and limitations must be clearly understood.

MSgt Craig Hillsman working with an attacking A-10 Thunderbolt II during a training exercise at the Nevada Test and Training Range. (Photo by MSgt Kevin J. Gruenwald, USAF)

BENEFITS

Minimize Fratricide—

The benefits of digitally-aided CAS are numerous with the most readily apparent advantage being the potential to minimize fratricide. For anyone that has played the "telephone game," where a message is passed from one individual to another, it is rare that the final recipient understands the message as the originator intended. Also, it takes time to pass the message from person to person vice having the originator of the message tell the final recipient directly. Admittedly, this is an extreme example, as CAS coordination is not done strictly from memory, but the point remains that messages passed verbally are rarely as accurate as digital, machine-to-machine messages. In other words, the more accurate the CAS message, the less likely are the chances for misinterpreting target descriptions, locations of friendly forces, or other key information. The desired end state is always to mitigate risk and eliminate fratricide.

Plug-and-Play—

A second benefit is ease of use. The Military Ruggedized Tablet (MRT) computer, and upcoming Small Wearable Computer (SWC), feature graphic interfaces, point-and-click icons, and user defined buttons. The Tactical Air Control Party–Close Air Support System (TACP-CASS) software used to execute digitally-aided CAS is also user friendly. Air Support Requests and digital messages are composed via intuitive titles leading the user to the correct program locations and easy-to-use drop down menus. The current version of TACP-CASS, v 1.4.1, incorporates a host of improvements from operator functionality to database compatibility; the latter generating the greatest command and control (C2) impact. TACP-CASS v 1.4.1 forms the inter-face that translates near real-time events into usable data disseminated via TBMCS to higher echelon C2 activities. This,

in effect, shortens the feedback loop for the next ATO cycle.

Reliability—

Digitally-aided CAS is also reliable. It utilizes an extant, proven architecture that removes the aggravation generated when radios are intermittent, jammed, or unreadable. Eliminating the potential for unfamiliar accents or the use of non-standard terminology is a plus as well.

Situational Awareness—

Digitally-aided CAS provides common situational awareness (SA). The Joint Terminal Attack Controller (JTAC) knows exactly what information the pilot was given and the pilots are confident they received the information the JTAC desired to pass. Additionally, the JTAC can see the air picture and the pilots can see and hook the J3.5 Land Track to maximize target area familiarization before they arrive overhead. Finally, other command and control agencies can see the same picture and facilitate air assets transitioning into the target areas.

Overall, digitally-aided CAS provides a more responsive, accurate, and flexible air support capability. If a situation requires immediate weapons expenditure, digitally-aided CAS allows pilots and JTACs to proceed more rapidly with common SA. Many refer to this as expediting the kill chain. Perhaps a better viewpoint is to refer to it as expediting the Observe, Orient, Decide, Act or OODA Loop to facilitate desired air effects over the ground scheme of maneuver. CAS remains today what it has always been, more about preserving coalition lives than about killing the adversary.

CHALLENGES AND LIMITATIONS

While the benefits are numerous, and the success in Afghanistan is well documented, there are also challenges and limitations associated with digitally-aided CAS.

Software Challenges—

If there is a note of caution concerning the digital CAS hardware construct, it lies within the software. Transmission windows, message formats, file sizes, data identifiers, update/refresh rates, and graphical tie-ins all happen at fantastic speeds as a result of complex calculations. Unfortunately, the gateway is often located at the end of the information superhighway where lag times, data collisions, and throughput bottlenecks are commonplace. Concern over latency has driven the Marines to prefer LOS digital CAS to mitigate lag potential. During a month in Afghanistan it is not uncommon for the Gateway system to suffer 100 instances of "software freeze." Images cease to move, messages retransmit several times or not at all, and jets appear and disappear from the net. None of these have been the result of hardware malfunctions, and every instance was cleared with a software re-initialization.

CAS remains today what it has always been, more about preserving coalition lives than about killing the adversary.

Not only does the software manage the operation of digitally-aided CAS, it controls the interface between the hardware components, which are standard off-the-shelf systems. The issue lies with the integration of these systems and the reliance on individual firmware sets to ensure data sharing and system control. TACP-CASS software, by virtue of expansive functionality, works only with specific radios operating with specific firmware. These restrictions do not represent significant obstacles to US forces but they do make digital CAS integration in the combined environment of Afghanistan somewhat limited. For example, most North Atlantic Treaty Organization (NATO) nations do not have access to PRC-117F radios (a hardware necessity) and those that do, don't have access to the current firmware sets or cryptographic loads for effective digitally-aided CAS employment.

Line-of-Site Limitations—

One of the biggest limitations to digitally-aided CAS in Afghanistan, is significantly reduced LOS. The Afghanistan ASOC, located in Kabul, is surrounded on three sides by mountains thus restricting the ASOC's LOS significantly compared to a LOS available in level terrain.

SSgt Nicholas Elek, a joint tactical air command and control journeyman, coordinates close air support with an Apache helicopter during a training exercise. (Photo by MSgt Scott Reed, USAF)

Despite the challenges and limitations of digitally-aided CAS, digital message communication success rates have been high when aircraft are on the link and operating on the ASOC's time reference.

Training Issues—

The JTACs in theater have not been immersed in TACP-CASS, as the need and requirement never presented themselves in high JTAC operations tempos. Without knowing how to use the tools available, they cannot optimize the system's capabilities.

Link Capabilities—

Aircraft must be link capable and on the same net time reference to participate in digitally-aided CAS operations. This limitation applies not solely to coalition and carrier aircraft, but to all US assets including unmanned aircraft systems (UAS) and electronic warfare (EW) airframes; two huge contributors to the irregular warfare (IW) fight.

Documentation and Stock—

Because digitally-aided implementation is relatively new and was fielded expeditiously, there is little documentation and spare parts in the event of system failures.

Standardization—

The same common data link standards that exist in Iraq cannot be found in Afghanistan. This creates confusion regarding what agency is responsible for what action. The Afghanistan ASOC has found that 28.2 free text messages are most useful, but this is not standard procedure, and not all aircraft deployed to Afghanistan are 28.2 capable. Aircraft with 28.8 capabilities can read, store, and recall text messages for an area of operations (AO), mission tasking permitting. This is especially useful in place of hand scribbled kneeboard notes and has been invaluable for providing aircraft AO updates.

Despite the challenges and limitations of digitally-aided CAS, digital message communication success rates have been high when aircraft are on the link and operating on the ASOC's time reference. During a 12-day period last year, 48 messages where successfully sent out of 89 attempted, 13 of which were troops-in-contact taskings. The 41 missed messages were attributed to aircraft dropping off the net as messages were sent, lack of message received acknowledgement from the pilot, or Situational Awareness Data Link (SADL) crypto mismatches. Regardless of the successes, Allied Forces Central Europe (AFCENT) and the ASOC are not resting on their laurels waiting for these problems to fix themselves.

CORRECTIVE ACTIONS

AFCENT is actively undertaking actions to mitigate the LOS issues endemic to Afghanistan with two ongoing initiatives. The first is an emphasis on role-on-beyond-line-of-sight-extensions (ROBEs). ROBEs are Joint Range Extensions (JRE) placed on air refueling aircraft that are constantly airborne in support of the Afghanistan mission. The intent of the ROBE in this capacity is to

extend the link picture when the aircraft is within LOS of a ground JRE. The ROBE initiative is not without its own challenges. Afghanistan is a deceptively large country and tankers supporting aircraft cannot always be within range or LOS of a ground JRE. This gap in coverage does not allow the ROBE to transmit the expanded air picture to the ground C2 agencies. Recognizing this problem, AFCENT is examining other options like the Battlefield Airborne Communication Node (BACN).

BACN is a dedicated aircraft that performs numerous relay functions to include relaying the link tracks. Unlike air refuelers, BACN maintains a static orbit offering a continued LOS link with a ground JRE station. Additionally, BACN orbits at a higher altitude than the air refuelers thus providing a larger view of the AOR air participants. With this, AFCENT is also pursuing a single net time reference (NTR), so that entities on the same NTR can exchange digital information. The advantages of BACN and having all CAS participants on the same NTR should be intrinsically obvious.

DIGITALLY-AIDED CAS IN AFGHANISTAN

Because digitally-aided CAS is relatively new, there are few extant TTP. The situation is likely to change in the near future, but in the interim, the digitally-aided CAS TTP authored by the 561st Joint Tactics Squadron remains the primary reference in Afghanistan and can be found on SIPR at http://www.nellis.af.smil.mil/units/561jts/flash/. The TTP enumerates in detail the JTAC's actions and addresses the ASOC's role.

Assuming a static target, the digitally-aided CAS process in Afghanistan is as follows: The JTAC builds the air support request and a 9-line then sends the report to the ASOC and Corps Fires. The JTAC then builds a J3.5 Land Track in accordance with the theater special instructions (SPINS). This J3.5 is linked to a specific definition of either hostile, suspect, friendly, or unknown. Once built, the J3.5 is published in the link structure via the ASOC Gateway. The JTAC can publish up to five friendly tracks. TACP-CASS users will automatically transmit a J2.0 Precise Participant Location Indictor showing the JTAC's position. In addition, free text enables the JTAC in the field to send digital text messages to an individual ground entity or broadcast to all ground entities via the digital link.

The ASOC's role in Afghanistan is more of administrative oversight ensuring the operations task link (OPTASKLINK) and mission planner code (both required for digital CAS operations) are current. They also ensure JTAC-initiated tracks reflect the real time situation and tracks for lower echelon entities are built and published when needed. While these are important enabling functions the ASOC has more critical roles to task or re-task aircraft using J12.0 Mission Assignment or J28.2 Free Text messages as well as to keep the common operating picture current with correct call signs and tracks. The link maintenance is a new role for an ASOC community that has historically relied upon voice or procedural controls. Now the ASOC can digitally confirm air assets have correctly heard and are executing an assigned task. The overall increase in SA is welcome but the wrong conclusion would be to think an ASOC is relieved of requirements to maintain historical skill sets. TACP-CASS is just another club in the golf bag.

From a technical perspective, operational digital CAS implementation is a relatively easy undertaking.

From a technical perspective, operational digital CAS implementation is a relatively easy undertaking. The principal tools are all mature technologies to include: time-sharing wireless networking, positional beaconing, automated message formatting, graphical in-

formation displays, composite air pictures, and standard voice/data radio transmissions. At the heart of the system, the Joint Range Extension is only a computer, not unlike any server you might find at the network control center on any military base. SADL and Low Volume Terminal (LVT-2) transmitters that connect to the jets' overhead are ground versions of the same systems that have linked airborne elements since Vietnam. Communication with JTAC teams in the field is accomplished with the same PRC-117F radios utilizing the same tactical satellite bands that have provided voice connectivity since Operation Desert Storm. The external links that tie everything to everyone are simply a scaled-down version of the same systems that generate radar composites in every air route traffic control center (ARTCC) in the United States.

There have already been instances where digital messages were the sole means through which the ASOC was able to contact the aircraft.

US Soldiers with the 4th Brigade Combat Team, 1st Armored Division, wait for a US Marine Joint Terminal Attack Controller to call in close air support during Atlantic Strike VII, 16 June 2008. (Photo by SSgt. Stephen J. Otero, USAF)

Using common TTP, digitally-aided CAS has had a major impact to date on mission accomplishment in Afghanistan. There have already been instances where digital messages were the sole means through which the ASOC was able to contact the aircraft. They are used at the ASOC level to task and re-task air assets using J3.5 and associated J12.0 mission assignment message for F-15Es or a 28.2 free text directive message for A-10s. While the A-10C and F-15E are the only two weapon systems currently working with the ASOC using digital communication there are other link capable coalition and carrier based aircraft in theater. The ASOC is currently unable to communicate with them only because they remain on the control and reporting center's (CRC) time reference. Although the ASOC can see these aircraft, as well as non-link-capable jets, through the CRCs JRE via JREAPC, TTP have not been formulated to establish the responsibilities between the CRC and ASOC in Afghanistan.

WHAT DIGITALLY-AIDED CAS WILL NOT DO

Digitally-aided CAS will not replace normal C2 practices. The digitally-aided CAS methodology is not mature enough, nor is it intended to replace voice communications, due to coordinate rounding errors and the necessity for verbal confirmation regarding the cleared hot call. The digital passing of coordinates via J3.5s will get aircraft close for sensor search but digitally passed coordinates are not sufficiently accurate for bomb on coordinate operations. Additional unclassified information on the inability to bomb using J3.5 coordinates can be found on SIPR at http://cnl.phdnswc.navy.smil.mil/common3/UnitEverthingXslt/f15e5e.xml on the NAVSEA Interoperability Capabilities and Limitations Unit and System Information site.

Users can also continue to expect ASOC Gateway malfunctions, aircraft system malfunctions, aircraft video data link pod failures, SATCOM issues, link problems, COMSEC mismatches, and continued LOS challenges. Whether system degradation necessitates CAS mission execution skill sets taught since the Vietnam War or whether digital-CAS capabilities reduce communications to a pod "talk on" and a "cleared call," voice communications will not be replaced by digitally-aided CAS anytime soon.

Despite its infancy, the simplicity, reliability, and SA enhancement of digitally-aided CAS for all CAS participants is additive and offers confirmation and confidence in CAS operations that previously did not exist. There are identified limitations for which solutions are being pursued and digitally-aided CAS will not be a substitute for radio voice operations. Still, digitally-aided CAS is expanding, and prudency directs that efforts to standardize digital CAS MTTP between Services and coalitions must take place now as digital-CAS grows beyond ROVER data links between aircraft and JTAC. Digitally-aided CAS is here to stay; now is the time to put more procedural rigor into this nascent but critical capability.

Immediate Air Support for Emerging Requirements

The 25th Infantry Division convoy going into the village of Saddam in the Kirkuk province of Iraq to search for known terrorists and weapons caches. (Photo by SSgt Samuel Bendet, USAF)

By
Barry G. Murray, LTC, USA (Ret.)

At the tactical level, emerging requirements develop that demand short-term planning and fire support solutions to ensure current operations achieve the commander's concept and intent. Often the optimum solution is to employ joint air power to achieve the desired effects and exponentially reduce risks to friendly ground forces. So how does a company commander, stepping out on a mission in a few hours, leverage joint air power to support their mission?

The ability to process air support requests (ASR) is an essential task to planning and executing the concept of fires. In fact, in addition to inputting an ASR, Soldiers need to know as much about processing ASRs as air component representatives at the tactical air control party (TACP) or Air Support Operations Center (ASOC). Ground commanders cannot afford to relinquish their responsibility to process immediate

So how does a company commander, stepping out on a mission in a few hours, leverage joint air power to support their mission?

ASRs exclusively to their joint terminal attack controller (JTAC)/air liaison officer (ALO). It is just too important! The problem of how to digitally process immediate ASRs is a predicament that commanders, fire supporters, and Soldiers at all levels continue to experience and deserves closer attention.

A logical process planned, prepared, and rehearsed prior to mission execution, allows units the ability to leverage joint air power before troops gain contact. Processing immediate ASRs can provide commanders with a proactive flexible response to potential dynamic situations. It merely requires unit leaders to survey the situation, anticipate requirements, and identify gaps in capabilities to neutralize the threat with knowledge of all resources available. There is a misunderstanding among ground warfighters that an immediate ASR is something that only their TACP/ASOC can do over the Air Force Air Request Net (AFARN) when already in contact with the enemy. This article is about getting necessary air support to a commander facing a situation that has not yet evolved into a troops in contact (TIC) situation, but too late to submit preplanned air support requests (ASR) because the mission order has been given.

There is a misunderstanding among ground warfighters that an immediate ASR is something that only their TACP/ASOC can do over the Air Force Air Request Net (AFARN) when already in contact with the enemy.

Immediate ASRs meet specific requirements that arise and by their nature cannot be submitted in sufficient time to be planned by the Joint Air Operations Center (JAOC), Combat Plans Division, and published in the air tasking order (ATO) because they did not make it into the air tasking cycle prior to the designated time per the JAOC planning battle rhythm. Immediate ASRs do not always mean as soon as possible, and regardless of whether the requester submitted the ASR hours or days prior to execution, if the JAOC, Master Air Attack Planning Team (MAAP), is not able to pair an air asset or mission on the ATO with an ASR number it automatically becomes an immediate ASR.

It is important to understand that immediate ASRs do not generate new missions on the ATO and are satisfied using preplanned scheduled and on-call missions already on the ATO. This is critical because it means that scheduled missions, with a mission time, assigned target or airspace tasking, and specific standard convention loads (SCL), as well as on-call missions, with block alert times, and flexible ordnance loads, will be re-tasked or cancelled to facilitate higher priority immediate ASRs. The JAOC or the appropriate theater air control system (TACS) command and control (C2) node supports immediate ASRs using the missions on the ATO when the appropriate Army chain of command authority, after conducting short term planning, assumes risk with other planned missions and approves the change to re-role/retarget tasked air assets to resource and support an immediate ASR.

These instances are most predominant during the Phase 5 "Execution" of the joint air tasking cycle process, by Combat Operations Division. It is here that all new ASRs for that ATO period are treated as immediate. In the JAOC dynamic targeting events, the ASOC must determine how to integrate, direct, and control air power to prosecute targets with assets already executing the ATO in order to support the ground commander. There is a habitual relationship between the Army and Air Force to provide air support, but other components may also provide support. The Army Air Ground System (AAGS) provides an interface between Army and air support agencies of other Services in planning, processing, and coordinating air support requirements to support ground operations.

During short-term planning, tactical Army units identify new mission requirements and plan, prepare, and coordinate for responsive air support. In the dynamic combat environment, battalion- and company-level planning is accomplished in a short timeline. Using the synchronized efforts of the TACP/ALO/JTAC, fires support element (FSE), and air defense airspace management/brigade aviation element (ADAM/ BAE) the commander can request, coordinate, and plan for responsive air support. The TACP serves as the maneuver commander's advisor on integrating air support with ground scheme of maneuver from company/battalion through division. The TACP/JTAC has a great capability to submit immediate ASRs via the AFARN/ joint force air request net (JFARN). What about those instances when there are hours available to plan a mission? Should units wait until they are in a TIC before submitting an immediate ASR when even the shortest response time may not be timely enough?

Current C2 systems offer a convenient way to expedite commander's immediate ASRs in a time constrained environment. Digital systems integration using Army Battle Command Systems (ABCS)–Theater Battle Management Core System (TBMCS) applications assist the request processes during ATO execution. Commanders can use Advanced Field Artillery Tactical Data System (AFATDS) to submit digital immediate ASRs through fire support channels when sufficient planning time is available. As the immediate ASR digitally transmits through the Army Air Ground System (AAGS) in near real time, each higher headquarters can analyze the most responsive and capable fires available and approve the ASR. Once the AFTADS-generated ASR is approved through Army channels, it is sent digitally into a TBMCS application, called Web Air Request Processor (WARP), to the ASOC for action. ASOC manages the distributed CAS assets for the Army commander and may reach back to request JAOC support if required to satisfy the immediate ASR. Any TACS agency that has TBMCS can monitor WARP for immediate ASR prioritization and processing.

Immediate requests are normally supported using on-call missions (GCAS, XCAS) but may be supported using scheduled missions (air interdiction [AI], CAS) per the commander's guidance. When the commander approves an immediate ASR, he is virtually cancelling one air support mission for another that is already on the ATO. As a result, the decision to determine if an immediate ASR takes precedence over a preplanned ASR is a critical one.

Current C2 systems offer a convenient way to expedite commander's immediate ASRs in a time constrained environment.

The Army Fires Cell (FC) has the situational awareness of all firing solutions and can help a commander determine if the immediate ASR is a higher priority. AFATDS used properly ensures that the right eyes and ears are involved in the decision-making process. It's ability to process immediate ASRs does not replace the ASOC's ability to process immediate CAS requests over the Joint Air Request Net (JARN), but AFATDS offers advantages to processing "quick turn" requests through the fire support channels.

VIGNETTE:

A brigade combat team (BCT) has received reliable intelligence of a weapons cache in their area of operations. They develop a course of action to move a company to destroy the site in 6 hours. The staff begins planning while the FC and TACP develop possible fire support solutions to support the ground force. Their recommendations include surface-to-surface fires and close air support. Knowing that they cannot get a request into the current ATO, they submit an immediate air support request using AFATDS

as soon as they identify the requirement.

While building the immediate ASR, the AFATDS operator checks the current air support list (ASL) to determine which preplanned ASRs were supported and possibly available to support emerging requirements. He notices an aircraft scheduled on the ATO in support of the BCT. The BCT commander knows he can authorize the ASOC to re-task supporting aircraft in favor of the immediate ASR, but deems the planned missions too high a priority and submits an immediate ASR to the ASOC. The AFATDS operator goes into mission processing to initiate a fire mission by inputting the necessary information about the target and date time group, so the system can perform weapons target pairing solutions. The BCT's digital ASR then goes through Army fire support channels until it gets to the Battlefield Coordination Detachment (BCD) who sends it to TBMCS. If the BCT has priority of fires, the higher headquarters may authorize sending their immediate ASRs directly to the BCD, or choose to review each ASR before letting it pass to next higher headquarters. Once the BCD sends the digital request from AFATDS to TBMCS it appears as an immediate ASR in WARP if the date/time group is the same as the ATO in execution. The Combat Operations Division (COD) is responsible for the effective execution of the current ATO and accomplishes this through subordinate Theater Air Control System (TACS) elements such as the ASOC, who then analyze the mission requirements and match the best available asset to satisfy the request, and pair the mission in WARP to order or scramble to satisfy the immediate ASR. This action sends a digital message from TBMCS/WARP to AFATDS and the ASR is returned to the requestor as supported with an assigned air mission number.

The company commander now has CAS in "direct support" of his mission before he steps out to destroy the weapons cache.

The company commander now has CAS in "direct support" of his mission before he steps out to destroy the weapons cache. Submitting an immediate ASR digitally has resulted in a coordinated effort that sets the conditions for success with air assets tasked to achieve a desired effect in direct support of the maneuver commander. Concurrently, the company fire support team (FIST) can develop a plan/overlay to provide terminal attack operations and clearance of fires, the JTAC can be in position to provide terminal attack control, and the ADAM/BAE has time to coordinate and integrate all the airspace users in the objective area. The ASOC and JAOC have provided a flexible response to a dynamic situation generated by an approved immediate ASR.

PUTTING IT ALL TOGETHER

Close air support (CAS) is often requested in hindsight as a means to respond to an attack after the situation has escalated beyond the ground forces' ability to defeat the enemy with minimum casualties. A better option is for commanders to anticipate enemy actions using thorough intelligence preparation of the operational environment (IPOE) analysis and using immediate ASRs as a means to provide responsive air support to the ground commander before a TIC develops. Good short-term planning can leverage air power to knock an adversary off balance, enabling more synchronized offensive operations.

CURRENT ALSA PUBLICATIONS

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TITLE	DATE	PUB #	DESCRIPTION / STATUS
AOMSW *Multi-Service Tactics, Techniques, and Procedures for Air Operations in Maritime Surface Warfare* **Distribution Restricted**	17 NOV 08	NTTP 3-20.8 AFTTP(I) 3-2.74	Description: This publication consolidates Service doctrine, TTP, and lessons-learned from current operations and exercises to maximize the effectiveness of "air attacks on enemy surface vessels". Status: **Current**
AVIATION URBAN OPERATIONS *Multi-Service Tactics, Techniques, and Procedures for Aviation Urban Operations* **Distribution Restricted**	9 JUL 05	FM 3-06.1 MCRP 3-35.3A NTTP 3-01.04 AFTTP(I) 3-2.29	Description: Provides MTTP for tactical-level planning and execution of fixed- and rotary-wing aviation urban operations. Status: **Assessment**
IADS *Multi-Service Tactics, Techniques, and Procedures for an Integrated Air Defense System* **Distribution Restricted**	12 OCT 04	FM 3-01.15 MCRP 3-25E NTTP 3-01.8 AFTTP(I) 3-2.31	Description: Provides joint planners with a consolidated reference on Service air defense systems, processes, and structures to include integration procedures. Status: **Revision**
JFIRE *Multi-Service Procedures for the Joint Application of Firepower* **Distribution Restricted**	17 DEC 07	FM 3-09.32 MCRP 3-16.6A NTTP 3-09.2 AFTTP(I) 3-2.6	Description: Pocket size guide of procedures for calls for fire, CAS, and naval gunfire. Provides tactics for joint operations between attack helicopters and fixed-wing aircraft performing integrated battlefield operations. Status: **Current**
JSEAD / ARM-J *Multi-Service Tactics, Techniques, and Procedures for the Suppression of Enemy Air Defenses in a Joint Environment* **Classified SECRET**	28 MAY 04	FM 3-01.4 MCRP 3-22.2A NTTP 3-01.42 AFTTP(I) 3-2.28	Description: Contributes to Service interoperability by providing the JTF and subordinate commanders, their staffs, and SEAD operators a single, consolidated reference. Status: **Assessment**
JSTARS *Multi-Service Tactics, Techniques, and Procedures for the Joint Surveillance Target Attack Radar System* **Distribution Restricted**	16 NOV 06	FM 3-55.6 MCRP 2-1E NTTP 3-55.13 AFTTP(I) 3-2.2	Description: Provides procedures for the employment of JSTARS in dedicated support to the JFC. Describes multi-Service TTP for consideration and use during planning and employment of JSTARS. Status: **Current**
KILL BOX *Multi-Service Tactics, Techniques, and Procedures for Kill Box Employment* **Distribution Restricted**	13 JUN 05	FM 3-09.34 MCRP 3-25H NTTP 3-09.2.1 AFTTP(I) 3-2.59	Description: Assists the Services and JFCs in developing, establishing, and executing Kill Box procedures to allow rapid target engagement. Describes timely, effective multi-Service solutions to FSCMs, ACMs, and maneuver control measures with respect to Kill Box operations. Status: **Revision**
SCAR *Multi-Service Tactics, Techniques, and Procedures for Strike Coordination and Reconnaissance* ***Distribution Restricted***	24 Nov 08	FM 3-60.2 MCRP 3-23C NTTP 3-03.4.3 AFTTP(I) 3-2.72	Description: This publication provides strike coordination and reconnaissance (SCAR) MTTP to the military Services for the conduct of air interdiction against targets of opportunity. Status: **Current**
SURVIVAL, EVASION, AND RECOVERY *Multi-Service Procedures for Survival, Evasion, and Recovery* **Distribution Restricted**	20 MAR 07	FM 3-50.3 NTTP 3-50.3 AFTTP(I) 3-2.26	Description: Provides a weather-proof, pocket-sized, quick reference guide of basic survival information to assist Service members in a survival situation regardless of geographic location. Status: **Current**
TAGS *Multi-Service Tactics, Techniques, and Procedures for the Theater Air-Ground System* **Distribution Restricted/ REL ABCA**	10 APR 07	FM 3-52.2 NTTP 3-56.2 AFTTP(I) 3-2.17	Description: Promotes Service awareness regarding the role of airpower in support of the JFC's campaign plan, increases understanding of the air-ground system, and provides planning considerations for the conduct of air-ground ops. Status: **Current**

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TST *Multi-Service Tactics, Techniques, and Procedures for Targeting Time-Sensitive Targets* **Distribution Restricted**	20 APR 04	FM 3-60.1 MCRP 3-16D NTTP 3-60.1 AFTTP(I) 3-2.3	Description: Provides the JFC, the operational staff, and components MTTP to coordinate, de-conflict, synchronize, and prosecute TSTs within any AOR. Includes lessons learned, multinational and other government agency considerations. Status: **Revision**
UAS *Multi-Service Tactics, Techniques, and Procedures for Tactical Employment of Unmanned Aircraft Systems* **Distribution Restricted**	3 AUG 06	FM 3-04.15 NTTP 3-55.14 AFTTP (I) 3-2.64	Description: Establishes MTTP for UAS addressing tactical and operational considerations, system capabilities, payloads, mission planning, logistics, and most importantly, multi-Service execution. Status: **Current**

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CORDON AND SEARCH *Multi-Service Tactics, Techniques, and Procedures for Cordon and Search Operations* **Distribution Restricted**	25 APR 06	FM 3-06.20 MCRP 3-31.4B NTTP 3-05.8 AFTTP (I) 3-2.62	Description: Consolidates the Services' best TTP used in cordon and search operations. Provides MTTP for the planning and execution of cordon and search operations at the tactical level of war. Status: **Current**
EOD *Multi-Service Tactics, Techniques, and Procedures for Explosive Ordnance Disposal in a Joint Environment* **Approved for Public Release**	27 OCT 05	FM 4-30.16 MCRP 3-17.2C NTTP 3-02.5 AFTTP(I) 3-2.32	Description: Provides guidance and procedures for the employment of a joint EOD force. It assists commanders and planners in understanding the EOD capabilities of each Service. Status: **Current**
MILITARY DECEPTION *Multi-Service Tactics, Techniques, and Procedures for Military Deception* **Classified SECRET**	12 APR 07	MCRP 3-40.4A NNTP 3-58.1 AFTTP(I) 3-2.66	Description: Facilitate the integration, synchronization, planning, and execution of MILDEC operations. Servce as a "one stop" reference for service MILDEC planners to plan and execute multi-service MILDEC operations. Status: **Current**
NLW *Multi-Service Service Tactics, Techniques, and Procedures for the Tactical Employment of Nonlethal Weapons* **Approved for Public Release**	16 AUG 07	FM 3-22.40 MCWP 3-15.8 NTTP 3-07.3.2 AFTTP(I) 3-2.45	Description: Supplements established doctrine and TTP providing reference material to assist commanders and staffs in planning/coordinating tactical operations. It incorporates the latest lessons learned from real world and training operations and examples of TTP from various sources. Status**: Current**
PEACE OPS *Multi-Service Tactics, Techniques, and Procedures for Conducting Peace Operations* **Approved for Public Release**	26 OCT 03	FM 3-07.31 MCWP 3-33.8 AFTTP(I) 3-2.40	Description: Provides tactical-level guidance to the warfighter for conducting peace operations. Status: **Change 1 - Signature Draft**
TACTICAL CONVOY OPERATIONS *Multi-Service Tactics, Techniques, and Procedures for Tactical Convoy Operations* **Distribution Restricted**	24 MAR 05	FM 4-01.45 MCRP 4-11.3H NTTP 4-01.3 AFTTP(I) 3-2.58	Description: Consolidates the Services' best TTP used in convoy operations into a single multi-Service TTP. Provides a quick reference guide for convoy commanders and subordinates on how to plan, train, and conduct tactical convoy operations in the contemporary operating environment. Status: **Signature Draft**
TECHINT *Multi-Service Tactics, Techniques, and Procedures for Technical Intelligence Operations* **Approved for Public Release**	9 JUN 06	FM 2-22.401 NTTP 2-01.4 AFTTP (I) 3-2.63	Description: Provides a common set of MTTP for technical intelligence operations. Serves as a reference for Service technical intelligence planners and operators. Status: **Current**
UXO *Multi-Service Tactics, Techniques, and Procedures for Unexploded Explosive Ordnance Operations* **Approved for Public Release**	16 AUG 05	FM 3-100.38 MCRP 3-17.2B NTTP 3-02.4.1 AFTTP(I) 3-2.12	Description: Describes hazards of UXO submunitions to land operations, addresses UXO planning considerations, and describes the architecture for reporting and tracking UXO during combat and post conflict. Status: **Current**

COMMAND AND CONTROL (C2) BRANCH - POC: alsac2@langley.af.mil			
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BREVITY *Multi-Service Brevity Codes* **Distribution Restricted**	30 OCT 07	FM 1-02.1 MCRP 3-25B NTTP 6-02.1 AFTTP(I) 3-2.5	Description: Defines multi-Service brevity which standardizes air-to-air, air-to-surface, surface-to-air, and surface-to-surface brevity code words in multi-Service operations. Status: **Current**
CIVIL SUPPORT *Multi-Service Tactics, Techniques, and Procedures for Civil Support Operations* **Distribution Restricted**	3 DEC 07	FM 3-28.1 NTTP 3-57.2 AFTTP(I) 3-2.67	Description: Fills the Civil Support Operations MTTP void and assists JTF commanders in organizing and employing Multi-Service Task Force support to civil authorities in response to domestic crisis. Status: **Current**
COMCAM *Multi-Service Tactics, Techniques, and Procedures for Joint Combat Camera Operations* **Approved for Public Release**	15 MAY 07	FM 3-55.12 MCRP 3-33.7A NTTP 3-13.12 AFTTP(I) 3-2.41	Description: Fills the void that exists regarding combat camera doctrine and assists JTF commanders in structuring and employing combat camera assets as an effective operational planning tool. Status: **Current**
HAVE QUICK *Multi-Service Tactics, Techniques, and Procedures for HAVE QUICK Radios* **Distribution Restricted**	7 MAY 04	FM 6-02.771 MCRP 3-40.3F NTTP 6-02.7 AFTTP(I) 3-2.49	Description: Simplifies planning and coordination of HAVE QUICK radio procedures. Provides operators information on multi-Service HAVE QUICK communication systems while conducting home station training or in preparation for interoperability training. Status: **Assessment**
HF-ALE *Multi-Service Tactics, Techniques, and Procedures for the High Frequency-Automatic Link Establishment (HF-ALE) Radios* **Distribution Restricted**	20 Nov 07	FM 6-02.74 MCRP 3-40.3E NTTP 6-02.6 AFTTP(I) 3-2.48	Description: Standardizes high power and low power HF-ALE operations across the Services and enables joint forces to use HF radio as a supplement / alternative to overburdened SATCOM systems for over-the-horizon communications. Status: **Current**
IDM *Multi-Service Tactics, Techniques, and Procedures for the Improved Data Modem Integration* **Distribution Restricted**	30 MAY 03	FM 6-02.76 MCRP 3-25G NTTP 6-02.3 AFTTP(I) 3-2.38	Description: Provides digital connectivity to a variety of attack and reconnaissance aircraft, facilitates exchange of near-real-time targeting data, and improves tactical situational awareness by providing a concise picture of the multi-dimensional battlefield. Status: **Assessment**
IFF *MTTP for Mark XII IFF* *Mode 4 Security Issues in a Joint Integrated Air Defense System* **Classified SECRET**	11 DEC 03	FM 3-01.61 MCWP 3-25.11 NTTP 6-02.2 AFTTP(I) 3-2.39	Description: Educates the warfighter to security issues associated with using the Mark XII IFF Mode 4 Combat Identification System in a joint integrated air defense environment. Captures TTP that addresses those security issues. Status: **Merged with revision of IADS. Will rescind when IADS revision is complete.**
JATC *Multi-Service Procedures for Joint Air Traffic Control* **Distribution Restricted**	17 JUL 03	FM 3-52.3 MCRP 3-25A NTTP 3-56.3 AFTTP(I) 3-2.23	Description: Provides guidance on ATC responsibilities, procedures, and employment in a joint environment. Discusses JATC employment and Service relationships for initial, transition, and sustained ATC operations across the spectrum of joint operations within the theater or AOR. Status: **Revision**
JTF IM *Multi-Service Tactics, Techniques, and Procedures for Joint Task Force Information Management* **Distribution Restricted**	10 SEP 03	FM 6-02.85 (FM 101-4) MCRP 3-40.2A NTTP 3-13.1.16 AFTTP(I) 3-2.22	Description: Describes how to manage, control, and protect information in a JTF headquarters conducting continuous operations. Status: **Assessment**
JTF LNO Integration *Multi-Service Tactics, Techniques, and Procedures for Joint Task Force (JTF) Liaison Officer Integration* **Distribution Restricted**	27 JAN 03 Retained in March 06	FM 5-01.12 (FM 90-41) MCRP 5-1.B NTTP 5-02 AFTTP(I) 3-2.21	Description: Defines liaison functions and responsibilities associated with operating a JTF. Status: **Assessment**

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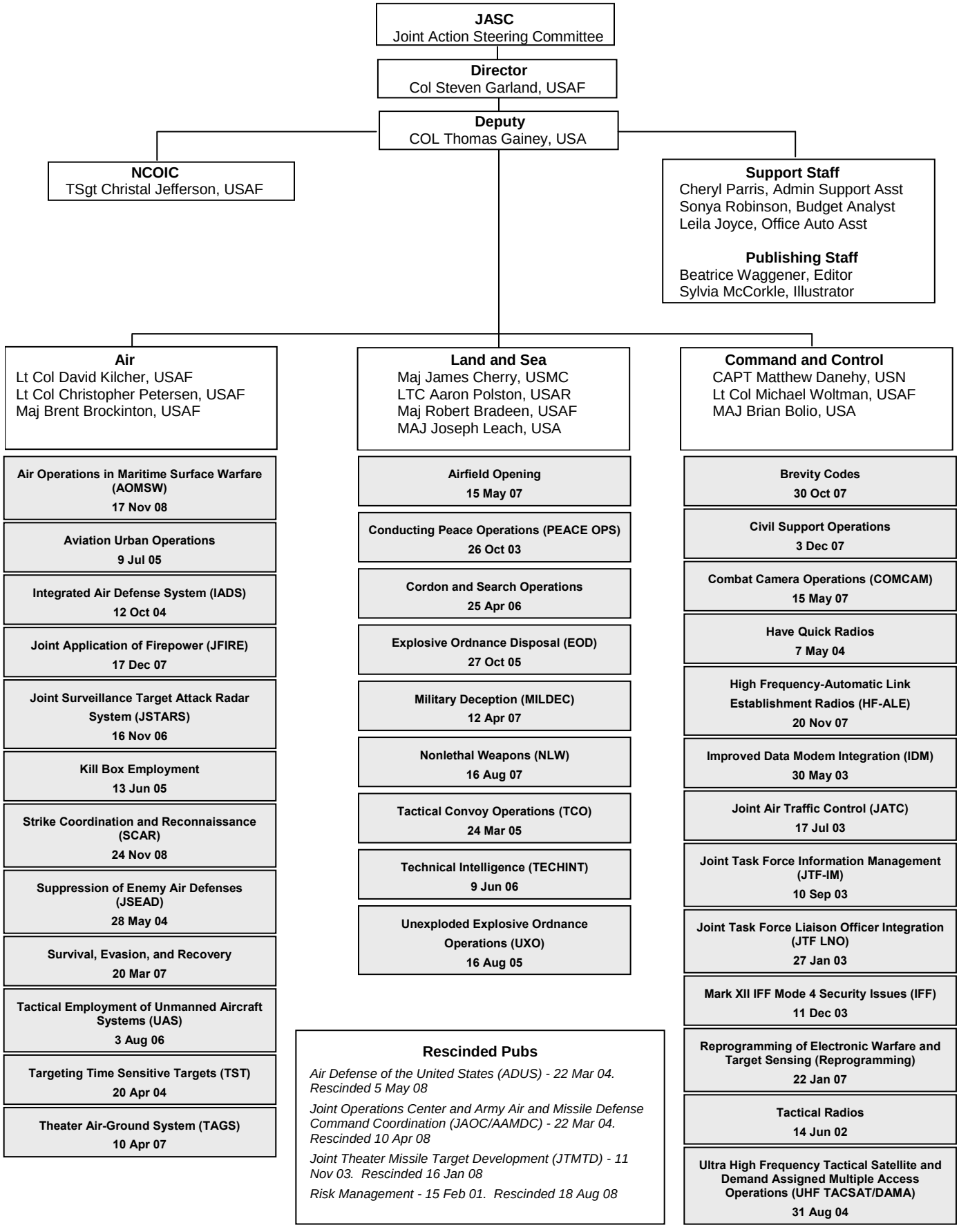
REPROGRAMMING *Multi-Service Tactics, Techniques, and Procedures for the Reprogramming of Electronic Warfare and Target Sensing Systems* **Distribution Restricted**	22 JAN 07	FM 3-13.10 (FM 3-51.1) NTTP 3-51.2 AFTTP(I) 3-2.7	Description: Supports the JTF staff in planning, coordinating, and executing reprogramming of electronic warfare and target sensing systems as part of joint force command and control warfare operations. Status: **Current**
TACTICAL RADIOS *Multi-Service Communications Procedures for Tactical Radios in a Joint Environment* **Approved for Public Release**	14 JUN 02	FM 6-02.72 MCRP 3-40.3A NTTP 6-02.2 AFTTP(I) 3-2.18	Description: Standardizes joint operational procedures for SINCGARS and provides an overview of the multi-Service applications of EPLRS. Status: **Assessment**
UHF TACSAT/DAMA *Multi- Service Tactics, Techniques, and Procedures Package for Ultra High Frequency Tactical Satellite and Demand Assigned Multiple Access Operations* **Approved for Public Release**	31 AUG 04	FM 6-02.90 MCRP 3-40.3G NTTP 6-02.9 AFTTP(I) 3-2.53	Description: Documents TTP that will improve efficiency at the planner and user levels. (Recent operations at JTF level have demonstrated difficulties in managing limited number of UHF TACSAT frequencies.) Status: **Assessment**

NEW PROJECTS

TITLE	SERVICE	DESCRIPTION / STATUS
LAND AND SEA BRANCH – POC alsab@langley.af.mil		
CFSOF I&I *Multi-Service Tactics, Techniques, and Procedures for Conventional Forces and Special Operations Forces Integration and Interoperability* **Distribution Restricted**	USA USMC USN USAF	Description: This publication assists in planning and executing operations where conventional forces and special operations forces (CF/SOF) occupy the same operational environment. Status: **Final Coordination Draft Edit**
TSFAT *Multi-Service Tactics, Techniques, and Procedures for Training Security Force Advisor Teams* **Distribution Restricted**	USA USMC USN USAF	Description: This publication will assist in the training of security force advisor teams. It serves as a reference to ensure coordinated multi-Service operations for planners and operators preparing for, and conducting, advisor team missions. Status: **Signature Draft Edit**
MDO *Multi-Service Service Tactics, Techniques, and Procedures for Military Diving Operations* **Distribution Restricted**	USA USMC USN USAF	Description: This MTTP publication describes US Military dive mission areas (DMA) as well as the force structure, equipment, and primary missions that each Service could provide to a JTF Commander. Status**: Program Development**
COMMAND AND CONTROL (C2) BRANCH – POC alsac2@langley.af.mil		
Tactical Chat (formally IRC) *Multi-Service Tactics, Techniques, and Procedures for Internet Tactical Chat in Support of Operations* **Distribution Restricted**	USA USMC USN USAF	Description: This publication provides multi-Service tactics, techniques, and procedures (MTTP) to standardize and describe the use of tactical chat for in support of operations. Thus, it provides commanders and their units with guidelines to facilitate coordination and integration of tactical chat when conducting multi-Service and joint force operations. Status: **Signature Draft**
AIRSPACE CONTROL *Multi-Service Tactics, Techniques, and Procedures for Airspace Control* **Distribution Restricted**	USA USAF	Description: This MTTP publication is a tactical level document, which will synchronize and integrate airspace command and control functions and serve as a single source reference for planners and commanders at all levels Status: **World Wide Review**

ALSA ORGANIZATION



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